AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): An apparatus for checking a link to a target hypertext database, said apparatus detecting a logically mismatched link to said hypertext database.

2. (previously presented): The apparatus for checking the link as set forth in claim 1, wherein said apparatus detects at least one of the following logically mismatched links:

a link having a mismatch between the hyperlink appearing on a source web page and a target web page;

a link having a mismatch between the hyperlink appearing on the source web page and a target web page having expired content;

a link having an inconsistent hyperlink appearing on multiple web pages;

a link having a different method of presenting an associated target web page than other links on the same web page or in the same website;

a link having a hyperlink that is not readily apparent to a user; and

a link that forms a loop with other links relating to a similar topic.

3. (previously presented): An apparatus for checking a link comprising:

an information storing unit which stores information about links; and

a condition detecting unit which detects a logically mismatched link.

4. (previously presented): The apparatus for checking a link as set forth in claim 3, further comprising an information collecting unit which collects said information about the links, wherein said information storing unit stores said information about the links collected by said information collecting unit.

5. (previously presented): The apparatus for checking a link as set forth in claim 3, further comprising a candidate providing unit which provides a correction candidate related to the logically mismatched link detected by said condition detecting unit.

6. (withdrawn): The apparatus for checking a hypertext as set forth in claim 5, further comprising an importance calculating unit which calculates importance value of said part including the logically mismatched link detected by said condition detecting unit.

7. (previously presented): The apparatus for checking a link as set forth in claim 5, further comprising a correction reflecting unit which corrects the logically mismatched link.

8. (withdrawn): The apparatus for checking a hypertext as set forth in claim 6, further comprising a total score calculating unit which calculates a total score related to said hypertext based on at least one of factors including: the importance value calculated by said importance calculating unit, the number of said parts detected by said condition detecting unit, and the rate

of the number of said part detected by said condition detecting unit corresponding to the total number of the links.

9. (withdrawn): The apparatus for checking a hypertext as set forth in claim 3, further comprising an importance calculating unit which calculates the importance value of the part including the logically mismatched link detected by said condition detecting unit.

10. (withdrawn): The apparatus for checking a hypertext as set forth in claim 9 further comprising a total score calculating unit which calculates a total score related to said hypertext based on at least one of factors including: the importance value calculated by said importance calculating unit, the number of said parts detected by said condition detecting unit, and the rate of the number of said part detected by said condition detecting unit corresponding to the total number of the links.

11. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit divides said information about the links into groups in accordance with a predetermined condition and detects a subgroup of the groups that includes the logically mismatched link.

12. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a link having a mismatch between the link and a target web page.

13. (currently amended): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing [[~~of~~]] the hyperlinks of links having the same target web page;

a second score calculated by comparing the target web pages of links having identical hyperlinks;

a third score calculated by comparing the target web pages of a plurality of links having the same source web page and identical hyperlinks; and

a fourth score calculated by comparing contents of a hyperlink and contents of a target web page.

14. (currently amended): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a link having a mismatch between the ~~hypertext~~ hyperlink appearing on a source web page and a target web page having expired content.

15. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing the hyperlinks of links having the same target web page;

a second score calculated by detecting a notice , including a movement notice or an expiration notice , in the contents of a target web page for an associated link; and

a third score calculated by detecting a period of validity in the contents of a target web page for an associated link and comparing said period of validity to the present date and time.

16. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a link on multiple web pages having an inconsistent hyperlink appearing on the multiple web pages.

17. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a link having a different method of presenting an associated target web page than other links on the same web page or in the same website.

18. (previously presented): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit divides said information about the links into groups including a major group and a minor group in accordance with a predetermined condition and detects said minor group as including the logically mismatched link.

19. (previously presented): The apparatus for checking a link as set forth in claim 18, wherein said candidate providing unit provides a correction candidate that makes said minor group conform to said major group.

20. (previously presented): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit detects a link having a mismatch between the link and a target web page.

21. (currently amended): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing

the hyperlinks of links having the same target web page;

a second score calculated by comparing the target web pages of links having identical hyperlinks;

a third score calculated by comparing the target ~~webpages~~ web pages of a plurality of links having a same source web page and identical hyperlinks; and

a fourth score calculated by comparing contents of a hyperlink and contents of a target web page.

22. (currently amended): The apparatus for checking a link as set forth in claim 21, wherein said candidate providing unit provides at least one of the following correction candidates including:

a first correction candidate for hyperlinks obtained by comparing the hyperlinks of links having the same target web page;

a second correction candidate for target web pages obtained by comparing the target web pages of links having identical hyperlinks;

a third correction candidate for target web pages obtained by comparing the target web pages of links having the same source web page and identical hyperlinks; and

a fourth correction candidate for hyperlinks obtained by comparing contents of a hyperlink and contents of a target web page.

23. (previously presented): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit detects a link having a mismatch between a hyperlink appearing on a source web page and a target web page having expired content.

24. (previously presented): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing the hyperlinks of links having the same target web page;

a second score calculated by detecting a notice, including a movement notice or an expiration notice, in the contents of a target web page for an associated link; and

a third score calculated by detecting a period of validity in the contents of a target web page for an associated link and comparing said period of validity to the present date and time.

25. (previously presented): The apparatus for checking a link as set forth in claim 24, wherein said candidate providing unit provides at least one of the following correction candidates including:

a first correction candidate for hyperlinks obtained by comparing the hyperlinks of links having the same target web page; and

a second correction candidate for target web pages obtained by extracting a new web page address from the contents of the target web page.

26. (previously presented): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit detects a link on multiple web pages having an inconsistent hyperlink appearing on the multiple web pages, and

said candidate providing unit provides a correction candidate for the hyperlink by comparing hyperlinks of links having the same target web page as that of said detected link.

27. (previously presented): The apparatus for checking a link as set forth in claim 5, wherein said condition detecting unit detects a link having a different method of presenting an associated target web page than other links on the same web page or in the same website, and

said candidate providing unit provides said correction candidate for the detected link by comparing the presentation method of the detected link and the presentation methods of the other links.

28. (previously presented): The apparatus for checking a link as set forth in claim 4, wherein said information collecting unit repeatedly collects said information about the links, and said information storing unit stores said information collected at different times.

29. (previously presented): The apparatus for checking a link as set forth in claim 28, wherein said condition detecting unit detects a link having a mismatch between a hyperlink appearing on a source web page and a target web page by analyzing said information and determining a change in the number of links during said times.

30. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a link having no hyperlink appearing on the source web page as the logically mismatched link.

31. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a link having a hyperlink on a source web page in which no character strings or images are included, or in which a character string or an image is expressed in an inconspicuous color or size, as the logically mismatched link.

32. (previously presented): The apparatus for checking a link as set forth in claim 3, wherein said condition detecting unit detects a group of links having associated hyperlinks appearing on source web pages that form a loop as said logically mismatched link, wherein the associated hyperlinks relate to a common topic.

33. (withdrawn): The apparatus for checking a hypertext as set forth in claim 6, wherein said importance calculating unit is operated to calculate importance value based on at least one of the following factors including:

(1) a sort of errors or unsuitability of the detected part detected by said condition detecting unit;

(2) accuracy of errors or unsuitability of said detected part;

(3) the number of links which is connected to the page including said detected part;

(4) a record of frequency of access to the page including said detected part; and

(5) a stratification level in the hypertext of the page including said detected part.

34. (withdrawn): The apparatus for checking a hypertext as set forth in claim 6, wherein said importance calculating unit is operated to calculate the importance value of the detected part detected by said condition detecting unit, and to control output condition for said detected part in accordance with said importance value, said output condition including the number of outputting said detected part or a method of outputting said detected part.

35. (currently amended): The apparatus for checking a link as set forth in claim 4, wherein said information collecting unit extracts character strings corresponding to hyperlinks of said links through character recognition when the hyperlinks are images and registers said extracted character strings as said information about the links in said information storing unit.

36. (currently amended): The apparatus for checking a link as set forth in claim 1, ~~having~~ wherein a link ~~on~~ to a target website ~~to be~~ is checked.

37. (currently amended): The apparatus for checking a link as set forth in claim 3, ~~having~~ wherein a link ~~on~~ to a target website ~~to be~~ is checked.

38. (currently amended): A method of checking a link in a database comprising:

accepting a condition for detecting a link, said link including a logical mismatch in an associated hyperlink appearing on the source web page;

detecting said link based on said condition;

displaying, on a display screen, a result of the detection as a list with at least three items including:

the associated hyperlink;

identification information about the source web page of said link; and

identification information about a target web page of said link.

39. (currently amended): The method of checking a link in a database as set forth in claim 38, wherein said list is sorted by having one of said at least three items as a key.

40. (currently amended): The method of checking a link in a database as set forth in claim 38 further comprising:

accepting a correction candidate for said at least three items; and

correcting said link in accordance with said correction candidate.

41. (previously presented): The method of checking a link in a database as set forth in claim 38, further comprising specifying a database.

42. (withdrawn): A method of checking a hypertext comprising the steps of:

(a) collecting information about links in a Web site;

(b) detecting a part including a logically mismatched link by referring to said information collected in said step (a);

(c) calculating importance value of said part detected in said step (b);

(d) calculating a total score related to said Web site;

(e) performing periodically said steps (a) to (d) for said Web site; and

(f) notifying of a change of said total score related to said Web site in accordance with time.

43. (withdrawn): A method of checking a hypertext comprising the steps of:

(a) collecting information about links in a Web site;

(b) detecting a part including a logically mismatched link by referring to said information collected in said step (a);

(c) calculating importance value of said part detected in said step (b);

(d) calculating a total score related to said Web site;

(e) performing periodically said steps (a) to (d) for said Web site; and

(f) notifying an alarm when said total score related to said Web site or said importance value of said part fulfills a predetermined condition.

44. (withdrawn): A method of checking a hypertext comprising the steps of:

(a) collecting information about links in a Web site;

(b) detecting a part including a logically mismatched link by referring to said information collected in said step (a);

(c) calculating importance value of said part detected in said step (b);

(d) calculating a total score related to said Web site;

(e) performing said steps (a) to (d) for a plurality of Web sites specified as targets; and

(f) outputting said total scores of said plurality of Web sites as a ranking list.

45. (previously presented): A computer program product comprising a computer usable storage medium having computer readable code embodied thereon, said computer readable code being executed by a computer including an information storing unit which stores information about links and a condition detecting unit which detects a logically mismatched link.

46. (previously presented): A computer program product comprising a computer usable storage medium having computer readable code embodied thereon, said computer readable code being executed by a computer having an information storing unit, said computer readable code causing said computer to serve as:

an information collecting unit which collects information about links and stores said information on said information storing unit; and

a condition detecting unit which detects a logically mismatched link.

47. (previously presented): The computer program product as set forth in claim 46, wherein said computer readable code causes said computer to serve as a candidate providing unit which provides a correction candidate related to the logically mismatched link detected by said condition detecting unit.

48. (withdrawn): The computer program product as set forth in claim 47, wherein said computer readable code includes a cord for having said computer serve as an importance calculating unit which calculates importance value of said part including the logically mismatched link detected by said condition detecting unit.

49. (previously presented): The computer program product as set forth in claim 47, wherein said computer readable code causes said computer to serve as a correction reflecting unit which corrects the logically mismatched link.

50. (withdrawn): The computer program product as set forth in claim 48, wherein said computer readable code includes a cord for having said computer serve as a total score calculating unit which calculates a total score related to said hypertext based on at least one of factors, said factors including the importance value calculated by said importance calculating unit, the number of said parts detected by said condition detecting unit, and the rate of the number of said part detected by said condition detecting unit corresponding to the total number of the links.

51. (withdrawn): The computer program product as set forth in claim 45, wherein said computer readable code includes a cord for having said computer serve as an importance calculating unit which calculates the importance value of the part including the logically mismatched link detected by said condition detecting unit.

52. (withdrawn): The computer program product as set forth in claim 51, wherein said computer readable code includes a cord for having said computer serve as a total score calculating unit which calculates a total score related to said hypertext based on at least one of factors, said factors including the importance value calculated by said importance calculating unit, the number of said parts detected by said condition detecting unit, and the rate of the

number of said part detected by said condition detecting unit corresponding to the total number of the links.

53. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit divides said information about the links into groups in accordance with a predetermined condition and detects a subgroup of the groups that includes the logically mismatched link.

54. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit detects a link having a mismatch between the link and a target web page.

55. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing link source descriptions of a plurality of the hyperlinks of links having a same target web page;

a second score calculated by comparing the target web pages of a plurality of links having identical hyperlinks;

a third score calculated by comparing the target web pages of a plurality of links having a same source web page and identical hyperlinks; and

a fourth score calculated by comparing contents of a hyperlink and contents of a target web page.

56. (previously presented): The computer program product as set forth in claim 45,

wherein said condition detecting unit detects a link having a mismatch between a hyperlink appearing on a source web page and a target web page having expired content, .

57. (previously presented): The computer program product as set forth in claim 45,

wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing link source descriptions of a plurality of the hyperlinks of links having the same target web page;

a second score calculated by detecting a notice, including a movement notice or an expiration notice, in the contents of a target web page; and

a third score calculated by detecting a period of validity in the contents of a target web page for an associated link and comparing said period of validity to the present date and time.

58. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit detects a link on multiple web pages having an inconsistent hyperlink appearing on the multiple web pages.

59. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit detects a link having a different method of presenting an associated target web page than other links on the same web page or in the same website.

60. (previously presented): The computer program product as set forth in claim 47, wherein said condition detecting unit divides said information about the links into groups including a major group and a minor group in accordance with a predetermined condition and detects said minor group as including the logically mismatched link.

61. (previously presented): The computer program product as set forth in claim 60, wherein said candidate providing unit provides a correction candidate that makes said minor group conform to said major group.

62. (previously presented): The computer program product as set forth in claim 47, wherein said condition detecting unit detects a link having a mismatch between the link and a target web page.

63. (previously presented): The computer program product as set forth in claim 47, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing the hyperlinks of links having the same target web page;

a second score calculated by comparing the target web pages of links having identical hyperlinks;

a third score calculated by comparing the target web pages of a plurality of links having a same source web page and identical hyperlinks; and

a fourth score calculated by comparing contents of a hyperlink and contents of a target web page.

64. (currently amended): The computer program product as set forth in claim 63, wherein said candidate providing unit provides at least one of the following correction candidates, said correction candidates including:

a first correction candidate for hyperlinks obtained by comparing the hyperlinks of links having the same target web page;

a second correction candidate for target web pages obtained by comparing the target web pages of links having identical hyperlinks;

a third correction candidate for target web pages obtained by comparing the target web pages of links having the same source web page and identical hyperlinks; and

a fourth correction candidate for hyperlinks obtained by comparing contents of a hyperlink and contents of a target web page.

65. (previously presented): The computer program product as set forth in claim 47, wherein said condition detecting unit detects a link having a mismatch between a hyperlink appearing on a source web page and a target web page having expired content.

66. (previously presented): The computer program product as set forth in claim 47, wherein said condition detecting unit calculates criteria scores of the links based on at least one of the following scores and detects the link with the highest criteria score as said logically mismatched link, said scores including:

a first score calculated by comparing the hyperlinks of links having the same target web page;

a second score calculated by detecting a notice, including a movement notice or an expiration notice, in the contents of a target web page for an associated link; and

a third score calculated by detecting a period of validity in the contents of a target web page for an associated link and comparing said period of validity to the present date and time.

67. (currently amended): The computer program product as set forth in claim 66, wherein said candidate providing unit provides at least one of the following correction candidates including:

a first correction candidate for hyperlinks obtained by comparing the hyperlinks of links having the same target web page; and

a second correction candidate for target web pages obtained by extracting a new web page address from the contents of the target web page.

68. (previously presented): The computer program product as set forth in claim 47, wherein said condition detecting unit detects a link on multiple web pages having an inconsistent hyperlink appearing on the multiple web pages, and

said candidate providing unit provides a correction candidate for the hyperlink by comparing hyperlinks of links having the same target web page as that of said detected link.

69. (currently amended): The computer program product as set forth in claim 47, wherein said condition detecting unit detects a link having a different method of presenting an associated target web page than other links on the same web page or in the same website, and

said candidate providing unit provides said correction candidate for the detected link by comparing the presentation method of the detected link and the presentation methods of the other links.

70. (currently amended): The computer program product as set forth in ~~any one of~~ claim 46, wherein said information collecting unit repeatedly collects said information about the links, and said information storing unit stores said information collected at different times.

71. (previously presented): The computer program product as set forth in claim 70, wherein said condition detecting unit detects a link having a mismatch between a hyperlink appearing on a source web page and a target web page by analyzing said information and determining a change in the number of links during said times.

72. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit detects a link having no hyperlink appearing on the source web page as the logically mismatched link.

73. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit detects a link having a hyperlink on a source web page in which no character strings or images are included, or in which a character string or an image is expressed in an inconspicuous color or size, as the logically mismatched link.

74. (previously presented): The computer program product as set forth in claim 45, wherein said condition detecting unit detects a group of links having associated hyperlinks appearing on source web pages that form a loop as said logically mismatched link, wherein the associated hyperlinks relate to a common topic.

75. (withdrawn): The computer program product as set forth in claim 48, wherein said importance calculating unit is operated to calculate importance value based on at least one of the following factors including:

(1) a sort of errors or unsuitability of the detected part detected by said condition detecting unit;

(2) accuracy of errors or unsuitability of said detected part;

(3) the number of links which is connected to the page including said detected part;

(4) a record of frequency of access to the page including said detected part; and

(5) a stratification level in the hypertext of the page including said detected part.

76. (withdrawn): The computer program product as set forth in claim 48, wherein said importance calculating unit is operated to calculate the importance value of the detected part detected by said condition detecting unit, and to control output condition for said detected part in accordance with said importance value, said output condition including the number of outputting said detected part or a method of outputting said detected part.

77. (currently amended): The computer program product as set forth in claim 46, wherein said information collecting unit extracts character strings corresponding to hyperlinks of said links through character recognition when the hyperlinks are images and registers said extracted character strings as said information about the links in said information storing unit.

78. (currently amended): The computer program product as set forth in claim 45, ~~, having~~ wherein a link ~~on~~ to a target website ~~to be~~ is checked.

79. (currently amended): The computer program product as set forth in claim 46, ~~, having~~ wherein a link ~~on~~ to a target website ~~to be~~ is checked.